



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/744,300	01/23/2001	Henning Andersen	Q62611	3916

7590 04/19/2006
Sughrue Mion Zinn Macpeak & Seas
2100 Pennsylvania Avenue N W
Washington, DC 20037

EXAMINER

CHAU, COREY P

ART UNIT PAPER NUMBER

2615

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/744,300

Applicant(s)

ANDERSEN ET AL.

Examiner

Corey P. Chau

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-19 and 21-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-19 and 21-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 17-19 and 21-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

3. Claim 17 recites, "switch means for optionally switching between a first position and a second position, said switch means acting in said first position to connect said voltage dividing network to attenuate said test signal, and switch means acting in said **second position to bypass said voltage dividing network in order to feed said test signal directly to said output transducer**". The specification discloses on page 6, disclose

"The provision of the voltage dividing resistor network allows for operating the hearing aid in two different modes ie. **a normal mode and a low mode** using the one and the same amplifier.

The **enlarge dynamic range is then achieve by bypassing the voltage divider in all situation where the enlarged dynamic range is not needed, in particular in normal use of the hearing aid, using only the dynamic range of the**

Art Unit: 2644

amplifier itself, and in situations where the enlarged dynamic range is needed, to use the voltage dividing resistor network to attenuate the output signal from the amplifier, thereby also attenuating the inherent noise of the amplifier.

Since the **voltage dividing resistor network is bypassed in all situations except during fitting**, the losses incurred by the resistors are of less importance".

Claim 17 is inconsistent with the disclosure which fails to comply with the enablement requirement. Claims 18-19, 21-27 is rejected for depending on rejected Claim 17.

4. Claims 22 and 32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

5. The specification as originally filed, does not support the limitations of "digital amplifier comprises a digital/analogue converted", as claimed in claim 22 now.

6. Claim 32 recites "said attenuation means comprises means for attenuating an output signal from said digital amplifier", which depends on Claim 22 that recites "said hearing aid being adapted to operate, in said second mode, to feed to said digital amplifier a test signal, and to generate by said digital amplifier an amplifier output signal within a second dynamic range, which second dynamic range is shifted to lower levels relative to said first dynamic range". The disclosure on pages 6 and 7 that the "voltage dividing network may according to one embodiment attenuate the output signal from the

Art Unit: 2644

digital amplifier, **or** according to another embodiment, attenuate the supply voltage for the digital amplifier". The specification as originally filed, does not support the limitations of "voltage dividing network may according to one embodiment attenuate the output signal from the digital amplifier" **and** "according to another embodiment, attenuate the supply voltage for the digital amplifier".

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 28 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6118877 to Lindemann et al. (hereafter as Lindemann).

Art Unit: 2644

9. Regarding Claim 28, Lindemann discloses a hearing aid adapted for in-situ fitting (i.e. hearing aid with in situ testing capability), said hearing aid comprising

a digital amplifier (i.e. the controller adjust the amplitude of the signal, which reads on digital amplifier because Applicant has not clearly define "digital amplifier" in the claim, which Examiner can broadly interpret this term in any manner consistent with the term)(218),

attenuation means (204 or 216) and

an output transducer (212), and

said hearing aid being adapted for selective operation in a first mode and a second mode (i.e. normal hearing aid mode and test mode),

said hearing aid being adapted to operate, in said first mode (i.e. normal hearing aid mode), to generate by said digital amplifier an amplifier output signal within a first dynamic range extending between an amplifier noise level and a maximum output level (column 6, lines 1-17), and

said hearing aid being adapted to operate, in said second mode (i.e. test mode), to feed to said digital amplifier a test signal (208,209,214), and to generate by said digital amplifier an amplifier output signal within a second dynamic range, which second dynamic range is shifted to lower levels relative to said first dynamic range (i.e. the hearing aid 200 executes a pure tone threshold audiogram test and a loudness scaling test in a manner similar to the hearing aid 100. The test signals are played at various frequency and amplitude and the hearing aid fitter asks the test subject to rate these sounds according to a loudness scale. The loudness scale may be for example, very

Art Unit: 2644

soft, soft, comfortable, loud, and very loud. Applicant has not clearly define in the claim that the test signal is use by the digital amplifier to generate an amplifier output signal within a second dynamic range; how the hearing aid is adapted to operate, in said second mode; and how the digital amplifier generates an amplifier output signal with a second dynamic range , which can be broadly interpret and much thing, such as when the test signal heard by the test subject is rated as being very soft or soft, which reads on “said hearing aid being **adapted to operate**, in said second mode, to feed to said digital amplifier a test signal, and to generate by said digital amplifier an amplifier output signal within a second dynamic range, which second dynamic range is shifted to lower levels relative to said first dynamic range”) (Fig. 2; column 5, lines 1-52).

10. Regarding Claim 33, Lindemann discloses a microphone and a selector switch which selector switch is adapted to selectively connect said microphone to, or disconnect said microphone from, said digital amplifier (Fig. 2)”

11. Claims 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4959867 to Lutz.

12. Regarding Claim 28, Lutz discloses a hearing aid adapted for in-situ fitting, said hearing aid comprising

a digital amplifier (i.e. Applicant has not clearly define “digital amplifier” in the claim, which Examiner can broadly interpret this term in any manner consistent with the term)(100),

attenuation means (102,103,106) and

- an output transducer (105), and
- said hearing aid being adapted for selective operation in a first mode and a second mode (column 2, lines 39-50),
- said hearing aid being adapted to operate, in said first mode, to generate by said digital amplifier an amplifier output signal within a first dynamic range extending between an amplifier noise level and a maximum output level (column 2, lines 39-50; column 3, lines 25-50), and
- said hearing aid being adapted to operate, in said second mode, to feed to said digital amplifier a test signal (107), and to generate by said digital amplifier an amplifier output signal within a second dynamic range, which second dynamic range is shifted to lower levels relative to said first dynamic range (column 2, lines 39-50; column 3, lines 25-50).
13. Regarding Claim 29, Lutz discloses attenuation means comprises a voltage dividing resistor network (Fig. 2).
14. Regarding Claim 30, Lutz disclose said resistor network comprises fixed value resistor (Fig. 2).
15. Claims 28-31 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5266919 to Cook et al. (hereafter as Cook).
16. Regarding Claim 28, Cook discloses a hearing aid adapted for in-situ fitting, said hearing aid comprising

a digital amplifier (i.e. Applicant has not clearly define "digital amplifier" in the claim, which Examiner can broadly interpret this term in any manner consistent with the term)(column 3, lines 44-55),

attenuation means (column 3, line 44 to column 4, line 2) and

an output transducer (66), and

said hearing aid being adapted for selective operation in a first mode and a second mode (column 4, line 16-27),

said hearing aid being adapted to operate, in said first mode, to generate by said digital amplifier an amplifier output signal within a first dynamic range extending between an amplifier noise level and a maximum output level (Fig. 2; column 4, line 16-27), and

said hearing aid being adapted to operate, in said second mode, to feed to said digital amplifier a test signal (i.e. tone), and to generate by said digital amplifier an amplifier output signal within a second dynamic range, which second dynamic range is shifted to lower levels relative to said first dynamic range (Fig. 2; column 4, line 16-27).

17. Regarding Claim 29, Cook discloses attenuation means comprises a voltage dividing resistor network (Fig. 2).

18. Regarding Claim 30, Cook disclose said resistor network comprises fixed value resistor (Fig. 2).

19. Regarding Claim 31, Cook discloses said digital amplifier is a switch mode amplifier, and wherein said attenuation means comprises means for attenuating a supply voltage for said switch mode amplifier (i.e. Applicant has not clearly define

"supply voltage" in the claim, which Examiner can broadly interpret this term in any manner consistent with the term, such as the any signal with a voltage because Applicant does not claim power supply voltage)(Fig. 2).

Response to Arguments

20. Applicant's arguments filed 3/03/2006 have been fully considered but they are not persuasive.

21. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., in situ fitting with the hearing aid acting as an audio signal source) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

22. With respect to Applicant's argument on page 7, stating that "While applicants disagrees that Lindemann teaches in situ fitting, it is in any event that case that at Lindemann is no more relevant in this respect than the acknowledged", has been noted. However, the Examiner respectfully disagrees. Applicant does not clearly define "in situ fitting" in the claim nor does Applicant disclose how the testing is done with regards to in situ fitting, therefore the "hearing aid with in situ fitting capability" of Lindemann read on "in situ fitting". If Applicant believe that the "in situ fitting" of Lindemann is different from the "in situ fitting" of the Applicant's invention, then the claims should be amended to reflect the differences between Lindemann and Applicant's invention and between prior

Art Unit: 2644

art and Applicant's invention to distinguish Applicant's invention over Lindermann and prior art.

23. Applicant's arguments with respect to claims 17-19, 21-33 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P. Chau whose telephone number is (571)272-7514. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 20, 2006
CPC


VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

3/20/06